Remarks

Claims 1, 2 and 14 have been amended. Claims 1-2, 4-8, 10, 13-16 and 18-20 remain.

<u>Response to Amendment</u>

All claims 1-2, 4-8, 10, 13-16 and 18-20 were previously rejected under 35 U.S.C. §103(a) as being unpatentable over US 6,516,000 B1 (Kshirsagar *et al.*) in view of US 6,295,276 B1 (Datta *et al.*). The Office Action states: "The amendment filed on 3/19/08 is sufficient to overcome the Chang et al. reference". This is likely a typographical error since Chang et al. was not previously cited. However, Applicant interprets this portion of the Office Action to mean that the amendment filed on 3/19/08 is sufficient to overcome the rejection based on Kshirsagar in view of Datta.

<u>Claim Rejections - 35 U.S.C. §103</u>

Claims 1-2, 4-8, 10, 13-1 6, 18-1 9, and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Chang (US 2003/0123448 A1) in view of Datta.

The basis for the rejection is that "Chang discloses all of the subject matter as described above except for a method of transmitting packets over power lines in a local area network" (Office Action, page 3, lines 16-17) and that "it would have been obvious to one having ordinary skill in the art at the time invention was made to use power line communication in LAN as taught by Datta" (Office Action, page 4, lines 3-4).

Applicant's position is that a *prima facie* case of obviousness has not been established because Chang does *not* "disclose all of the subject matter described above". Specifically, with respect to claims 1 and 14, Chang does *not* teach "*removing the source MAC address and destination MAC address* from the MAC header and *inserting into the MAC header a* Connection ID (VCI) (page 4, paragraph 47, and page 5, paragraph 55 see step 92 in figure 3)" (Office Action, page 3, lines 10-12).

Paragraph 47 of Chang explains that content addressable memory (CAM) 58 is a lookup table that "provides a *mapping* of MAC destination addresses to virtual channel connection (VCCs) and vice versa." In paragraphs 52 and 53 and with reference to Fig. 3 it is explained that "the destination MAC address from the packet header is input to CAM 58 for *lookup* (step 84), and that if "the CAM lookup is a hit, the information returned by the CAM lookup is used to determine the virtual channel connection (VCC) for the MAC destination

address of the packet (step 88)". Nowhere does Chang teach *removing the MAC address from the MAC header*.

In paragraph 55 and again with reference to Fig. 3, it is explained that "the packet forwarding subsystem 56 prepares the packet for forwarding to the destination based on the VCC and LEC ID information (step 92)" and that "in one embodiment, the LEC ID is *prepended* to the packet header". Again this does not teach *removing the MAC address from the header*; in fact, the term "prepends" means that the LEC-ID is *added* to the header without replacing the MAC address. This meaning is supported by Chang's claim 4 which includes the step of "*appending* the LEC ID for the packet to the packet header".

Chang's "summary of the invention", specifically paragraphs 26-27, makes it clear that Chang does *not remove or replace the MAC addresses*, but merely maps the MAC addresses to VCCs. Thus Chang teaches nothing more than the prior art of "mapping". Interestingly, in the previous Office Action, Kshirsagar was relied upon for teaching mapping. In that previous Office Action it was stated: "the examiner views mapping ATM VCI to MAC address and vice versa in the bridge as the method replacing MAC address with ATM address (VCI) and vice versa". However, Applicant explained the distinction between *mapping* and *replacing*, and the rejection was overcome. In Applicant's invention, in contrast to the prior art of mapping, there is a reduction in overhead in sending the data packets over the PLC LAN. (Applicant's specification, page 4, lines 14-16).

The Examiner's interpretation of Chang is arguably understandable because of the unfortunate use of the term "extract" in Chang to refer to "extracting the header" (paragraph 50). However, it is clear that this term means "snooping" or "reading" the packet header and then writing a copy of the header to memory subsystem 54. Paragraph 50 explains that the header includes "a source MAC address, a destination MAC address, a virtual LAN (VLAN) tag, a packet type and a VLAN identifier (VLAN ID)". If the entire packet header were to be removed from the packet, rather than merely read and copied to memory, the packet could not be transmitted without this information. Moreover, Applicant's invention does not remove the packet header, only the MAC addresses from the packet header.

The framework for the objective analysis for determining obviousness under 35 U.S.C. §103 is stated in *Graham v. John Deere Co*. Obviousness is a question of law based on underlying factual inquiries, which include determining the scope and content of the prior art. Here, the prior art of Chang is relied upon for teaching each and every feature of

Applicant's claims, with the sole exception of a PLC network. However, because Chang does not teach each and every one of these features, it cannot support the Section 103(a) rejection.

To make Applicant's invention unequivocally distinguishable from Chang, Applicant's independent claims 1 and its dependent claim 2, and independent claim 14 have been amended. These amended claims now require:

"transmitting said packet with said modified MAC header having the ConnectionID *but not having the source MAC address and the destination MAC address*" (Claim 1);

"a modified MAC header containing a ConnectionID *but not containing the source MAC address and destination MAC address*, … and transmitting said packet with said source and destination MAC addresses in the MAC header *but without the Connection ID in the MAC header*" (Claim 2); and

"transmitting said modified first bridged packet with the non-PLC header having said inserted ConnectionID *but not having the 48-bit MAC addresses*, … a PLC MAC header having a ConnectionID containing the TEI of the PLC source station and the TEI of said bridging device *but not having 48-bit MAC addresses*, … and transmitting said modified second bridged packet with the PLC MAC header having the inserted 48-bit MAC address of the non-PLC destination station *but not having said ConnectionID*" (Claim 14).

In view of the above comments and amendments to the claims, Applicant believes all remaining claims are now in condition for allowance. The Examiner may call Applicant's attorney if a telephone conference will expedite the prosecution of this application.

September 16, 2008   Respectfully submitted,

                                      / Thomas R. Berthold, Reg. No. 28,689 /

                                      Thomas R. Berthold, Attorney for Applicant
                                      Reg. No. 28,689
                                      18938 Congress Junction Ct.
                                      Saratoga, CA 95070-4570
                                      Phone: (408) 396-8411
                                      Fax: (408) 904-6605